Neonatal Chest Phantom

GAMMEX 610

The NEW Gammex 610 Neonatal Chest Phantom is designed for routine quality assurance monitoring of computed and digital radiography systems. Because the phantom replicates both the anatomic structure and the tissue attenuation characteristics of a real neonate, the phantom can be imaged using clinical protocols resulting in a test of the entire imaging chain, including image processing parameters.

The Gammex 610 is the first anthropomorphic neonatal phantom that sufficiently represents a 1-2 kg neonate in its transmission characteristics, histogram, physical size and structure. As such, it can be imaged using the appropriate clinical parameters to provide a measure of image consistency over time. The phantom also contains clinically relevant image quality challenges for resolution and noise in the form of a lung with simulated pneumothorax with pleural thickening, and a lung with simulated hyaline membrane disease.

The Gammex 610 Neonatal Chest Phantom answers a recognized need by both international and national standards groups such as IPEM and AAPM for a comprehensive quality assurance program for computed and digital radiography addressing the two major concerns of *patient exposure* and *image quality*.

Patient exposure is a concern because computed and digital radiographic equipment will scale the over exposed images to the proper optical density. The result, often referred to as “Dose Creep” is especially relevant in pediatric imaging where some patients are radiographed several times per day.

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610 PHANTOM

DIAGNOSTIC RADIOLOGY

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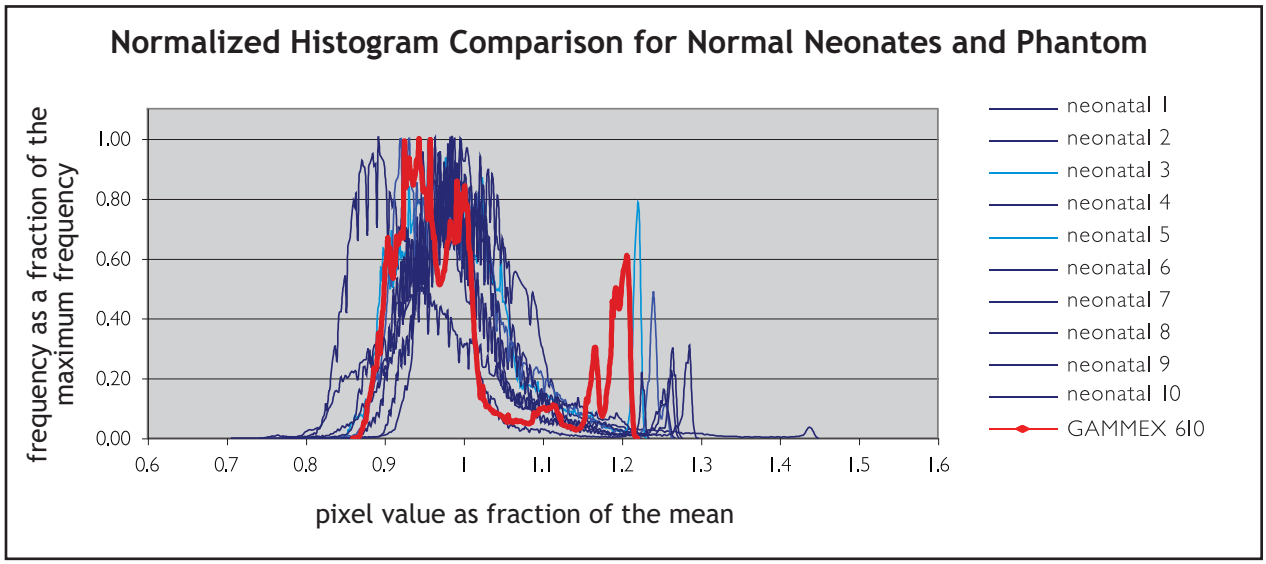
Evaluation of *image quality* is complicated by the way in which computed and digital radiographic systems use a-priori knowledge of anatomy being radiographed to process and display the image. Image quality can be degraded through improper parameter selection. The effect of parameter selection on image quality can only be assessed by using a phantom that replicates the human anatomy. The Gammex 610 phantom is specially suited as a tool for establishing the lowest possible exposure level that still maintains diagnostic image quality.



SPECIFICATIONS

Size. . . . . Approx. 100x100x54 mm
Weight. . . . . Approx. 500 grams
Composition . . . . (Tissue Equivalent Materials);
Air, Muscle, Normal Lung,
Hyaline Membrane Lung, Bone

Lungs Included
#1 - Hyaline Membrane Disease: Pneumothorax
#2 - Hyaline Membrane Disease
Texture: No Pneumothorax
#3 - Normal Texture: Pneumothorax
#4 - Normal Texture: No Pneumothorax

Gammex 610 Phantom comes with a custom carrying case.